UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,822	10/23/2003	Leonardo E. Blanco	13768.783.185	1433

47973 7590 09/11/2007

WORKMAN NYDEGGER/MICROSOFT
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UT 84111

EXAMINER	
HAJNIK, DANIEL F	

ART UNIT	PAPER NUMBER
2628	

MAIL DATE	DELIVERY MODE
09/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/693,822	BLANCO ET AL.	
	Examiner	Art Unit	
	Daniel F. Hajnik	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/26/2007 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claim 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot (NPL Doc, "Declarative Event-Oriented Programming") in view of Grinstein et al. (US Patent 6,714,201).

As per claim 1, Elliot teaches the claimed:

1. In a computing environment, a system comprising:

a first component comprising an event list generator, an interval generator, and a high-level timing component, *(section 1, 1st paragraph, "to add higher-level event types" and section 1, 1st paragraph, "In other cases, as in collisions during a game, the higher-level events are about an*

application's content rather than its user interface" and the middle of the 2nd col on page 57, "The meaning of an event is a (possibly infinite) sequence of occurrences, each of which is a time/value pair" where the sequences of occurrences can occur at a given interval)

wherein the event list generator *(the middle of the 2nd col on page 57, "The event-forming operators")* comprises a state machine *(the middle of the 2nd col on page 57, "sequential chain of events" where a given point in the chain can be a state and thus the sequence makes up a group of states or state machine)* and groups events initially scheduled by specified clock properties into an event list, *(section 8, 1st paragraph, "stack manager" where the stack is an event list and the middle of the 1st col on page 61, "The stacker function returns an event whose occurrences contain a snapshot of the top of the stack at each legitimate pop" where this stack of events forms an event list, further Elliot also teaches of an event queue in section 1, 1st paragraph as well which can also be an event list)*

wherein the interval generator uses the event list to compute a corresponding interval list; *(middle of 1st col on page 58, "One may think of these operations as building up a 'temporal display list' to be traversed iteratively by Fran's run-time system" where these temporal display list can create an interval list for the low level timing engine because each one is traversed iteratively during run-time and each is based on time periods (temporal periods or intervals)).*

a second component comprising a low-level timing component *(1st paragraph in the abstract, "low level events ... possibly augmented with timers and UI components")* and a low-level

computation engine, *("On WM_PAINT: First draw the graph paper background and the poly-Bezier curve. Then iterate through the control points")*

wherein the second component receives the interval list from the first component, wherein the low-level computation engine controls output based on current time and *(middle of 2nd col on page 60, "Then iterate through the control points. For each one, draw it at a position" and in figure 6 where the drawing occurs based on the current time because the animation as shown changes over time and thus the low-level drawing operations must be based on the current time).*

Elliot does not explicitly teach the remaining claim limitations.

Grinstein teaches the claimed:

interpolates the location of an animated object based on interval data and current time *(over col 15, Table 3, Under "Paths and path constraints- Define paths with key frames & scripting interpolating function")*;

a system clock which provides consistent time to both the high-level timing component and the low-level timing component *(col 17, lines 32-35, "The OpenMotion API internally maintains a simulation clock. This clock can be configured by the programmer as a real-time clock").*

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Elliot with Grinstein in order to take advantage of the well-proven and efficient animation and programming technologies relating to interpolating between known positions and the utilization

of a system clock. Both of these functions are well-documented and effectively implemented in the existing technology and thus Elliot can benefit from their use in implementing his respective system as well.

As per claim 2, Elliot teaches the claimed limitation by teaching of in figure 6, which shows the progress of an animation.

As per claim 3, Elliot does not explicitly teach the claimed limitation. Grinstein teaches the claimed interpolating a current process value *(over col 15, Table 3, Under "Paths and path constraints- Define paths with key frames & scripting interpolating function")*. It would have been obvious to one of ordinary skill in the art at the time of invention to the claimed feature with Elliot. The motivation of claim 1 is incorporated herein.

As per claim 4, Elliot teaches the claimed limitation *(in the abstract where the low level events, or second component events, are handled by the Windows system which can process the user interface events faster than the higher level events which can require more processing time, thus resulting in the low-level events occurring faster).*

As per claim 5, Elliot teaches the claimed limitation *(middle of 2nd col on page 60, "Then iterate through the control points. For each one, draw it a position" and in figure 6 where the drawing occurs based on the current time because the animation as shown changes over time and thus the event list of drawing events is based upon a current time).*

As per claim 6, Elliot teaches the claimed feature *(1st paragraph under section 1, "The notion of event is central in the construction of most software that involves interaction ... Such software is typically organized around a centralized event queue" where this queue or event list can be modified based upon the interactive event).*

2. Claims 7-9, 16, and 18-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot (NPL Doc, "Declarative Event-Oriented Programming") in view of Grinstein et al. (US Patent 6,714,201) in further view of Hudson (NPL Document "Animation Support in a User Interface Toolkit: Flexible, Robust, and Reusable Abstractions").

As per claim 7, Elliot does not explicitly teach the claimed limitations. Hudson teaches the claimed limitation by teaching of "(these transitions in turn schedule themselves and may possibly be place in the selected set and started)" (middle paragraph in 2nd col on page 8). In this instance, these events are implicit because they schedule themselves rather than the user directly scheduling them. It would have been obvious to one of ordinary skill in the art to Elliot, Grinstein, and Hudson in order to better control and organize variable data associated with interactive events.

As per claim 8, Elliot does not explicitly teach the claimed limitations. Hudson teaches the claimed limitation by teaching of idle events where nothing happens (unused events) (bottom

paragraph in 2nd col on page 7). It would have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot. The motivation of claim 7 is incorporated herein.

As per claim 9, Elliot does not explicitly teach the claimed limitations. Hudson teaches the claimed limitation by teaching of "The final four parameters to the transition establish its time interval. This transition is set to operate over a time interval beginning in 500 milliseconds and lasting for 4 seconds" (middle of 1st col on page 7). In this instance, the output is determined based upon the current time (beginning in 500 milliseconds) and the duration (lasting 4 seconds). It would have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot. The motivation of claim 7 is incorporated herein.

As per claim 16, Elliot does not explicitly teach the claimed limitation. Hudson teaches the claimed limitation by teaching of "The current time is recorded just before the interactor tree is traversed to produce drawing updates" (top paragraph in 2nd col on page 9) where the current time is function data because it is used by the recording function to record the current time. It would have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot in order to achieve more useful clock based data.

As per claim 18, the reasons and rationale for the rejection of claim 1 is incorporated herein.

Elliot does not explicitly teach the remaining claim limitations as list below.

Hudson teaches the claimed:

the second component providing a progress value to a low-level animation subsystem *(in figure 6 which shows animation progress within an interval and bottom paragraph in 2nd col on page 5, "parameter values that uniformly track the passage of time")*

the low-level animation subsystem determining a current value for a varying property of an animated object *(in figure 6 where the animation property values (i.e. object position) varies based on the progress value).*

It would have been obvious to one of ordinary skill in the art to Elliot, Grinstein, and Hudson in order to better animation objects which slowing vary over time by using a progress measure for an animated object.

As per claim 19, Elliot does not explicitly teach the claimed limitations. Hudson teaches the claimed limitation by teaching of determining an interval based on the start and end times, and determining a progress value through modifying the animation within the interval (bottom paragraph in 2nd col on page 6). Hudson further teaches the claimed limitation in figure 6 which shows animation progress within an interval and by teaching of "parameter values that uniformly track the passage of time" (bottom paragraph in 2nd col on page 5).
It would have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot. The motivation of claim 1 is incorporated herein.

As per claim 20, Elliot does not explicitly teach the claimed limitations. Hudson teaches the claimed limitation in figure 6 where the animation property values (i.e. object position) varies based on the progress value.
It would have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot. The motivation of claim 1 is incorporated herein.

As per claim 21, these claims limitations are similar to limitations disclosed in claim 1 and thus are subject to the same reasons for rejection under Elliot.

As per claim 22, Elliot teaches the claimed feature *(1st paragraph under section 1, "The notion of event is central in the construction of most software that involves interaction ... Such*

software is typically organized around a centralized event queue" where this queue or event list can be modified based upon the interactive event).

As per claim 23, Elliot does not explicitly teach the claimed limitations. Hudson teaches the claimed limitation by teaching of "(these transitions in turn schedule themselves and may possibly be place in the selected set and started)" (middle paragraph in 2nd col on page 8). In this instance, these events are implicit because they schedule themselves rather than the user directly scheduling them. Further, these implicit events can be triggered in response to interactive events (also see top of 2nd col on page 5). It would have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot in order to better maintain and organize the data associated with interactive events.

As per claim 24, Elliot does not explicitly teach the claimed limitations. Hudson teaches the claimed limitation by teaching of adding an ideal event (an unused event) after a real-time drawing operation (top paragraph in 2nd col on page 9) where this drawing operation can be in response to an interactive event (also see top of 2nd col on page 5).
It would have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot. The motivation of claim 23 is incorporated herein.

As per claim 25, Elliot teaches the claimed limitation *(middle of 1st col on page 58, "Fran's run-time system" where run-time generally means a real-time response which requires constructing frames at a frame refresh rate).*

As per claims 26-28, Elliot teaches the claimed limitation by teaching of basing the system off of program code (see top 1st col on page 66) which is intended to run on a computer system. It is inherent for a computer-readable storage medium, computer readable-instructions, and general purpose computer system using computer processors to be used in order for the system to function correctly as described by Elliot. Elliot teaches the claimed "graphics subsystem" by teaching of the use of rendering (see section 4) where this is accomplished using the graphics subsystem.

Claims 10-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot in view of Grinstein in further view of Milne (US Patent 5553222, herein referred to as "Milne").

As per claim 10, Elliot does not explicitly teach the claimed limitation. Milne teaches the claimed limitation in figure 5 where clock A is shown to have a repeat count of 2 where the repeat count indicates that clock B ticks at least twice as often as clock A. For example, clock A waits for clock B to be repeated twice before adding a unit of time to its count. It would have been obvious to one of ordinary skill in the art to combine Elliot, Grinstein, and Milne. One advantage to the combination is that Milne teaches of improved clock control which provide a variety of operations to control the playback for synchronization or for user preference.

As per claim 11, Elliot does not explicitly teach the claimed limitation. Milne teaches the claimed limitations by stating "Clocks can travel backwards in time" (col 7, lines 28). It would

have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot. The motivation of claim 10 is incorporated herein.

As per claims 12 and 13, Elliot does not explicitly teach the claimed limitation. Milne teaches the claimed limitations by teaching of basing a moving playback position (which is the equivalent of a play head on a tape recorder) according to a clock rate (col 9, lines 12-16). Milne teaches of slowing down and speeding up a clock such as a master clock (col 9, lines 30-33) where this slowing down and speeding up would have to have an associated de-acceleration or acceleration. It would have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot. The motivation of claim 10 is incorporated herein.

As per claim 14, Elliot does not explicitly teach the claimed limitation. Milne teaches the claimed limitation by teaching of "A non-driven time source knows how to find its current time, and it has a member function, GetNextTime(), that returns the next time that an alarm or delay should be fired" (col 12, lines 57-60) where this process of finding the next time an alarm or delay should be fired is a seek instruction because it is seeking out the next time an associated event should fire. It would have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot. The motivation of claim 10 is incorporated herein.

As per claim 15, Elliot does not explicitly teach the claimed limitation. Milne teaches the claimed limitation by teaching of a clock rate (speed data) by stating "a is a floating point value that determines the rate of the slave clock's current time relative to the master clock's current

time)" (col 8, lines 25-27). It would have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot. The motivation of claim 10 is incorporated herein.

As per claim 17, Elliot does not explicitly teach the claimed limitation. Milne teaches the claimed limitation by teaching of associating different clocks (and thus their associated players which are components) with a unique thread by teaching of blocking/unblocking threads. Milne states "A clock can block a thread until a certain time, called the delay time, is reached. If the clock is going forward, the thread is unblocked when the clock's current time is equal to or greater than the delay time" (col 7, lines 35-39). It would have been obvious to one of ordinary skill in the art to use the claimed feature with Elliot. The motivation of claim 10 is incorporated herein.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel F. Hajnik whose telephone number is (571) 272-7642. The examiner can normally be reached on Mon-Fri (8:30A-5:00P).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka J. Chauhan can be reached on (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

D. F.

DFH

U Chauhan
ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER